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EXAMINER	
ROE, JESSEE RANDALL	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Continuation Sheet

Applicant's arguments filed 22 January 2010 have been fully considered but they are not persuasive.

First, the Applicant primarily argues that the Office is applying an improper *in haec verba* requirement by stating that the Specification does not recite "without a coating" or "uncoated"; compliance with the written description requirement does not require literal support using the same terms in the specification and in the claims; and a person skilled in the art would have understood the inventor to have been in possession of a method of making a ferritic stainless steel article having an uncoated electropolished oxidation resistant surface at least based on Example 1 in the Specification, which describes the making of a ferritic stainless steel article having an uncoated, electropolished, and oxidation resistant surface.

In response, the Examiner notes that the specification does not provide support for "uncoated" because the ferritic stainless steel of the instant invention would be coated. According to Example 1, as referred to by Applicant, the ferritic stainless steel would have an oxide coating [0053] or an oxide scale coating [0055]. Thus, Applicant does not have support for the ferritic stainless steel being “uncoated” since nowhere in the Specification refers to the ferritic stainless steel as being “without a coating” or “uncoated”.

Second, the Applicant primarily argues that the language of claim 99 contains a typographical error, which is corrected by the amendment filed 22 January 2010.

In response, the Examiner notes that Applicant's amendment filed 22 January 2010 would require further consideration based on the change in scope and has therefore not been entered.

Third, the Applicant primarily argues that in order for an electropolished surface of a ferritic stainless steel to develop an oxide scale, the chemical elements that constitute the electropolished surface of the alloy must react with oxygen in an oxidizing atmosphere. The Applicant further argues that for this to occur, the electropolished surface must remain exposed to the surrounding oxidizing atmosphere, otherwise the oxygen would be physically and chemically blocked from reacting with the constituent chemical elements of the electropolished surface and an oxide scale could not develop and in order to remain exposed to the surrounding atmosphere, an electropolished surface of a ferritic stainless steel cannot be coated as in Ishibashi ('311).

In response, the Examiner notes that the ferritic stainless steel would have an oxide coating [0053] or an oxide scale coating [0055] and therefore the instant invention would not distinguish from Ishibashi ('311) since Ishibashi ('311) discloses a substantially similar stainless steel composition and the same process. MPEP 2112.01 I. Additionally, the intermediate product of Ishibashi ('311) would be electropolished and uncoated.

Fourth, the Applicant primarily argues that the Office never explains why it would have been obvious for a person of skill in the art considering Ishibashi ('311) to eliminate the coating layer adhered to the underlying electropolished steel substrate.

In response, the Examiner finds Applicant's argument with respect to eliminating the coating layer adhered to the underlying electropolished steel substrate unclear since elimination of the coating layer was not proposed by the Examiner, but rather that the intermediate product of Ishibashi ('311) would be electropolished and uncoated whereas the product of Ishibashi ('311) would be electropolished and coated.

Fifth, the Applicant primarily argues that the product made in Ishibashi ('311) is not identical to or substantially identical in structure or composition to a product made according to the methods recited in claims 1, 10 and 11 because Ishibashi ('311) teaches a surface coating.

In response, the Examiner notes that the claims do not preclude the presence of a surface coating on the ferritic stainless steel due to the transitional language "comprising".

Sixth, the Applicant primarily argues that the Office's assertion that it would have been obvious to optimize the 0.001 to 5.0 weight percent aluminum range disclosed in Ishibash ('311) in order to determine the 0.2 to 1.0 weight percent aluminum range recited in claims 1, 10 and 11. The Applicant primarily additionally argues that there is no suggestion in Ishibashi ('311) that aluminum concentration correlates to any recognized result that may be optimized, let alone correlating aluminum concentration to oxidation resistance and the formation of a distinct oxide scale on electropolished surfaces under oxidizing conditions "a particular parameter must first be recognized as a result-effective variable, *i.e.*, a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be

characterized as a routine experimentation and therefore the Office's optimization is improper.

In response, the Examiner notes that Ishibashi ('311) discloses 0.001 to 5 weight percent of at least one element from a group including aluminum whereas the claimed range is 0.2 to 1.0 weight percent aluminum. To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. MPEP 716.02(d)(II). The Applicant has failed to demonstrate the criticality of the claimed range of aluminum.

Seventh, the Applicant primarily argues that the Office does not explain why or how a person skilled in the art would know that the electropolished steel of Szummer in view of the secondary references would have the same features as recited in the present claims considering that Szummer does not recognize any effect of electropolishing on high temperature oxidation resistance, let alone resulting in a chemical modification that results in the development of a distinct aluminum-rich oxide scale.

In response, the Examiner notes that Szummer in view of the secondary references discloses a substantially similar composition in addition to the same processing. Therefore, the same features would be expected. MPEP 2112.01 I.

Eighth, the Applicant primarily argues that high temperature oxidation resistance and aluminum-rich oxide scales were not known before the Subject Application and refers the Examiner to the Declaration of Michael P. Brady, Ph.D. submitted on August

23, 2007, which provides independent expert testimony that the features recited in the present claims would have been unexpected before the Subject Application. The Applicant further argues that a method for studying the surface microstructure of ferritic stainless steels after hydrogen charging would not render obvious a method for making a ferritic stainless steel article having an oxidation resistant surface that develops a distinct aluminum-rich oxide scale under high temperature oxidation conditions.

In response, the Examiner notes that just because Michael P. Brady, Ph.D. finds the oxidation test results surprising does not necessarily mean that these results were not expected in the prior art, as set forth by the Examiner. The Examiner further notes that the specification of the instant invention contains numerous plots and it is unclear what evidence the Applicant is referring to as being "unexpected". Unexpected results must be commensurate in scope with the claimed invention. MPEP 716.02(d).

Ninth, the Applicant primarily argues that the expert testimony provided in the Declaration of Michael P. Brady, Ph.D. is independent evidence that is entitled to appropriate weight.

In response, the Examiner asserts that appropriate weight has been given to the Declaration of Michael P. Brady, Ph.D. though the Examiner does not consider this Declaration persuasive for the reasons set forth above and in Previous Office Actions.

Tenth, the Applicant primarily argues that Dr. Brady refers to scientific journal articles in his declaration confirming that persons having ordinary skill in the metallurgical arts believed that roughening the surface of a stainless steel, and not flattening the surface, would improve oxidation resistance.

In response, the Examiner notes that the documents cited by Dr. Brady "The Effect of Alloy Grain-Size and Surface Deformation on the Selective Oxidation of Chromium in Ni-Cr Alloys at Temperatures of 900° and 1000°C" by C.S. Giggins et al. and "The Effect of Surface Preparation on the Oxidation Behavior of Gamma TiAl-Base Intermetallic Alloys" by J.M. Rakowski et al. are drawn to nickel and titanium alloys whereas the alloys of the instant invention are ferritic stainless steels. Therefore, it has not been established why people in the metallurgical arts believed that roughening the surface of a stainless steel, which is an iron base alloy, would improve oxidation resistance since the documents cited relate to the processing of nickel-base alloys and titanium-base alloys none of these documents refer to stainless steels much less ferritic stainless steels.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571)272-5938. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/JR/